CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

TIME SCHEDULE ORDER NO. R5-2008-XXXX

REQUIRING THE CITY OF ROSEVILLE
DRY CREEK WASTEWATER TREATMENT PLANT
PLACER COUNTY
TO COMPLY WITH REQUIREMENTS PRESCRIBED IN ORDER NO. R5-2008-XXXX
(NPDES PERMIT NO. CA0079502)

The California Regional Water Quality Control Board, Central Valley Region, (hereafter Regional Water Board) finds that:

1. On XX June 2008, the Regional Water Board adopted Waste Discharge Requirements (WDR) Order No. R5-2008-XXXX, prescribing waste discharge requirements for the City of Roseville (hereafter Discharger), Dry Creek Wastewater Treatment Plant (hereafter Facility), Placer County.

2. WDR Order No. R5-2008-XXXX, contains Final Effluent Limitations IV.A.1.a., which reads, in part, as follows:

Table 6. Effluent Limitations

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Cadmium, Total Recoverable	µg/L	0.94	--	2.25	--	--
Carbon Tetrachloride	µg/L	0.25	--	0.50	--	--
Cyanide, Total (as CN)	µg/L	4.1	--	8.9	--	--
Dibromochloromethane	µg/L	0.41	--	0.82	--	--
Dichlorobromomethane	µg/L	0.56	--	1.12	--	--
Mercury, Total Recoverable	µg/L	0.05	--	0.10	--	--
	lbs/day[1]	0.008	--	0.015	--	--
Zinc, Total Recoverable	µg/L	35	--	71	--	--

[1] Based on a average dry weather flow of 18 million gallons per day (mgd).

3. The effluent limitations specified in Order No. R5-2008-XXXX for cadmium, carbon tetrachloride, dibromochloromethane, dichlorobromomethane, mercury, and zinc are based on implementation of the California Toxics Rule. The effluent limitations for cadmium, carbon tetrachloride, dibromochloromethane, dichlorobromomethane, mercury, and zinc are new limitations, which were not prescribed in previous WDR Order No. 5-00-164, adopted by the Regional Water Board on 16 June 2000. Order No. 5-00-164 did include effluent limitations for cadmium and cyanide, however the previous cadmium effluent limitations were floating limitations based on measured hardness; the cyanide effluent limitations were less stringent than the effluent limitations included in Order No. R5-2008-XXXX, and were applied as different averaging periods (22 µg/L as a maximum concentration and 5.2 as a 4-day average, continuous concentration).

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4. California Water Code (CWC) section 13300 states: "*Whenever a regional board finds that a discharge of waste is taking place or threatening to take place that violates or will violate requirements prescribed by the regional board, or the state board, or that the waste collection, treatment, or disposal facilities of a discharger are approaching capacity, the board may require the discharger to submit for approval of the board, with such modifications as it may deem necessary, a detailed time schedule of specific actions the discharger shall take in order to correct or prevent a violation of requirements.*"

5. Federal regulations, 40 CFR section 122.44 (d)(1)(i), require that NPDES permit effluent limitations must control all pollutants which are or may be discharged at a level which will cause or have the reasonable potential to cause or contribute to an in-stream excursion above any State water quality standard, including any narrative criteria for water quality. Beneficial uses, together with their corresponding water quality objectives or promulgated water quality criteria, can be defined per federal regulations as water quality standards.

6. In accordance with CWC section 13385(j)(3), the Regional Water Board finds that, based upon results of effluent monitoring, the Discharger is not able to consistently comply with the new effluent limitations for cadmium, carbon tetrachloride, cyanide, dibromochloromethane, dichlorobromomethane, mercury, and zinc. These limitations are new requirements that become applicable to the Order after the effective date of adoption of the waste discharge requirements, and after 1 July 2000, for which new or modified control measures are necessary in order to comply with the limitation, and the new or modified control measures cannot be designed, installed, and put into operation within 30 calendar days.

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7. The Discharger is not able to immediately comply with the new effluent limitations for cadmium, carbon tetrachloride, cyanide, dibromochloromethane, dichlorobromomethane, mercury, and zinc. The Clean Water Act and the California Water Code authorize time schedules for achieving compliance.

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The Discharger has indicated in an Infeasibility Report submitted 17 March 2008, and revised on 2 May 2008, that additional time is required beyond California Toxic Rule compliance date of 18 May 2010 to comply with the final effluent limitations for cadmium and zinc. In particular, the Discharger anticipates the need to implement additional source controls, as well as evaluate the need for site-specific translators and/or water effect ratios for cadmium and zinc. Therefore, the Regional Water Board is providing until 1 June 2013 for the Discharger to comply with the final effluent limitations for cadmium and zinc.

The Discharger has indicated in its Infeasibility Report submitted 17 March 2008, and revised on 2 May 2008, that additional time is necessary to comply with final effluent limitations for carbon tetrachloride, dibromochloromethane and dichlorobromomethane. In particular, the Discharger anticipates that the addition of ultraviolet disinfection and the elimination of chlorine in its treatment process will be necessary to comply with the new effluent limitations. However, the new or modified disinfection system and control measures cannot be designed, installed and placed into operation until June 2011. Therefore, the Regional Water Board is providing until 1 June 2011 for the Discharger to comply with the final effluent limitations for carbon tetrachloride, dibromochloromethane and dichlorobromomethane.

The Discharger additionally indicated in its Infeasibility Report submitted 17 March 2008, and revised on 2 May 2008, that additional time to comply with final effluent limitations for cyanide and mercury is necessary. In addition to implementing ultraviolet disinfection for the elimination of chlorine byproducts, the Discharger proposes to change analytical laboratories to reduce the amount of false positives that have been resulting in its monitoring results. With improved quality monitoring data, the Discharger will be able to more accurately evaluate potential sources of cyanide within its wastewater collection and treatment system. To comply with final mercury effluent limitations, the Discharger has implemented source control and identification measures and has identified the overall source of mercury into the WWTP influent. However, the Discharger is unable to comply with new mercury effluent limitations and must implement further source controls that will result in the actual reduction of mercury into the influent wastestream.

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The Regional Water Board finds that a compliance date of 1 June 2011 is the shortest and most practicable time schedule for the Discharger to comply with final effluent limitations for cyanide, and that a compliance date of 1 June 2013 is the shortest most practicable time schedule for the Discharger to comply with final effluent limitations for mercury.

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8. This Order provides a time schedule for the Discharger to develop, submit, and implement methods of compliance, including utilizing pollution prevention activities or constructing necessary treatment facilities to meet these new effluent limitations.

9. CWC sections 13385(h) and (i) require the Regional Water Board to impose mandatory minimum penalties upon dischargers that violate certain effluent limitations. CWC section 13385(j)(3) exempts certain violations from the mandatory minimum penalties, "*where the waste discharge is in compliance with either a cease and desist order issued pursuant to Section 13301 or a time schedule order issued pursuant to Section 13300, if all the [specified] requirements are met.*"

10. Compliance with this Order exempts the Discharger from mandatory penalties for violations of effluent limitations for cadmium, carbon tetrachloride, cyanide, dibromochloromethane, dichlorobromomethane, mercury, and zinc only, in accordance with CWC section 13385(j)(3). CWC section 13385(j)(3) requires the Discharger to prepare and implement a pollution prevention plan pursuant to section 13263.3 of the California Water Code. Therefore, a pollution prevention plan will be necessary for cadmium, carbon tetrachloride, cyanide, dibromochloromethane, dichlorobromomethane, mercury, and zinc in order to effectively reduce the effluent concentrations by source control measures.

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11. Since the time schedule for completion of action necessary to bring the waste discharge into compliance exceeds 1 year, this Order includes interim requirements and dates for their achievement. The time schedule does not exceed 5 years.

The compliance time schedule in this Order includes interim performance-based effluent limitation for cadmium, carbon tetrachloride, cyanide, dibromochloromethane, dichlorobromomethane, mercury, and zinc. The interim effluent limitations consist of a maximum daily effluent concentration derived using sample data provided by the Discharger. In developing the interim limitations, where there are 10 sampling data points or more, sampling and laboratory variability is accounted for by establishing interim limits that are based on normally distributed data where 99.9 percent of the data points will lie within 3.3 standard deviations of the mean (*Basic Statistical Methods for Engineers and Scientists, Kennedy and Neville, Harper and Row, 3rd Edition, January 1986*). Where actual sampling shows an exceedance of the proposed 3.3-standard deviation interim limit, the maximum detected concentration has been established as the interim limitation. In developing the interim limitations, when there are less than 10 sampling data points available, the USEPA *Technical Support Document for Water Quality- based Toxics Control* ((EPA/505/2-90-001), TSD) recommends a coefficient of variation of 0.6 be utilized as representative of wastewater effluent sampling. The TSD recognizes that a minimum of 10 data points is necessary to conduct a valid statistical analysis. The multipliers contained in Table 5-2 of the TSD are used to determine a maximum daily limitation based on a long-term average objective. In this case, the long-term average objective is to maintain, at a minimum, the current plant performance level. Therefore, when there are less than 10 sampling points for a constituent, an interim limitation is based on 3.11 times the maximum observed effluent concentration to obtain the daily maximum interim limitation (TSD, Table 5-2).

The following table summarizes the calculations of the interim performance-based effluent limitations for cadmium, carbon tetrachloride, cyanide, dibromochloromethane, dichlorobromomethane, mercury, and zinc:

Interim Effluent Limitation Calculation Summary

Parameter	**MEC (µg/L)**	**Mean (µg/L)**	**Std. Dev.**	**# of Samples**	**Interim Limitation (µg/L)**
Cadmium, Total Recoverable	12	3.8	3.3	20	14.8
Carbon Tetrachloride	0.9	--	--	8	2.8
Cyanide	8.80	3.99	2.76	17	13.1
Dibromochloromethane	1.30	--	--	8	4.0
Dichlorobromomethane	9.30	--	--	8	28.9
Mercury, Total Recoverable	0.08	--	--	8	0.25
Zinc, Total Recoverable	71	--	--	8	221

In addition to the concentration-based interim effluent limitations, a mass-based effluent limitation is established for mercury because it is a bioaccumulative chemical of concern.

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The mass-based effluent limitation for mercury was derived using the interim effluent limitation concentration of 0.00025 mg/L and the average dry weather flow rate of 18 mgd as follows:

(0.00025 mg/L) x (18 mgd) x (8.34 lbs/day conversion factor) = 0.038 lbs/day

12. The Regional Water Board finds that the Discharger can, in addition to other treatment and control options, undertake source control to maintain compliance with the interim limitations included in this Order. Interim limitations are established when compliance with the final effluent limitations cannot be achieved by the existing discharge. Discharge of constituents in concentrations in excess of the final effluent limitations, but in compliance with the interim effluent limitations, can significantly degrade water quality and adversely affect the beneficial uses of the receiving stream on a long-term basis. The interim limitations, however, establish an enforceable ceiling concentration until compliance with the effluent limitation can be achieved.

13. On XX June 2008 in Rancho Cordova, California, after due notice to the Discharger and all other affected persons, the Board conducted a public hearing at which evidence was received to consider a Time Schedule Order under CWC section 13300 to establish a time schedule to achieve compliance with waste discharge requirements.

14. Issuance of this Order is exempt from the provisions of the California Environmental Quality Act (Public Resources Code section 21000, et seq.), in accordance with CWC section 15321(a)(2), Title 14, California Code of Regulations.

15. Any person adversely affected by this action of the Board may petition the State Water Resources Control Board to review this action. The petition must be received by the State Water Resources Control Board, Office of the Chief Counsel, P.O. Box 100, Sacramento, CA 95812-0100, within 30 days of the date on which this action was taken. Copies of the law and regulations applicable to filing petitions will be provided on request.

IT IS HEREBY ORDERED THAT:

1. The Discharger shall comply with the following time schedule to ensure compliance with cadmium, carbon tetrachloride, cyanide, dibromochloromethane, dichlorobromomethane, mercury, and zinc effluent limitations at Section IV.A.1.a., contained in WDR Order No. R5-2008-XXXX as described in the above Findings:

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Task	**Date Due**
Submit Method of Compliance Workplan/Schedule	**Within 6 months** after adoption of this Order
Submit Pollution Prevention Plan (PPP)[1] pursuant to CWC section 13263.3 for cadmium, carbon tetrachloride, cyanide, dibromochloromethane, dichlorobromomethane, mercury, and zinc	**Within 1 year** after adoption of this Order
Implement PPP[1] pursuant to CWC section 13263.3 for cadmium, carbon tetrachloride, cyanide, dibromochloromethane, dichlorobromomethane, mercury, and zinc	**Within 2 years** after adoption of this Order
Progress Reports[2]	**1 January, annually**, after approval of work plan until final compliance
Full compliance with carbon tetrachloride, cyanide, dibromochloromethane, and dichlorobromomethane effluent limitations	**1 June 2011**
Full compliance with cadmium, mercury, and zinc effluent limitations	**1 June 2013**

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[1] The PPP shall be prepared and implemented for cadmium, carbon tetrachloride, cyanide, dibromochloromethane, dichlorobromomethane, mercury and zinc and shall meet the requirements specified in CWC section 13263.3.

[2] The progress reports shall detail what steps have been implemented towards achieving compliance with waste discharge requirements, including studies, construction progress, evaluation of measures implemented, and recommendations for additional measures as necessary to achieve full compliance by the final date.

2. The following interim effluent limitations shall be effective immediately. The interim effluent limitation for carbon tetrachloride, cyanide, dibromochloromethane, and dichlorobromomethane shall be effective until **31 May 2011**, or when the Discharger is able to come into compliance with final effluent limitations, whichever is sooner:

Parameter	**Units**	**Maximum Daily Effluent Limitation**
Carbon Tetrachloride	µg/L	2.8
Cyanide	µg/L	13.1
Dibromochloromethane	µg/L	4.0
Dichlorobromomethane	µg/L	28.9

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3. The following interim effluent limitations shall be effective immediately. The interim effluent limitation for cadmium, mercury, and zinc shall be effective until **1 June 2013**, or when the Discharger is able to come into compliance with final effluent limitations, whichever is sooner:

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Parameter	**Units**	**Maximum Daily Effluent Limitation**
Cadmium, Total Recoverable	µg/L	14.8
Mercury, Total Recoverable	µg/L	0.25
	lbs/day	0.038
Zinc, Total Recoverable	µg/L	221

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4. For the compliance schedule required by this Order, the Discharger shall submit to the Regional Water Board on or before each compliance report due date, the specified document or, if appropriate, a written report detailing compliance or noncompliance with the specific schedule date and task. If noncompliance is being reported, the reasons for such noncompliance shall be stated, and shall include an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Regional Water Board by letter when it returns to compliance with the time schedule.

5. If, in the opinion of the Executive Officer, the Discharger fails to comply with the provisions of this Order, the Executive Officer may apply to the Attorney General for judicial enforcement. If compliance with these effluent limitations is not achieved by the full compliance date, the discharge would not be exempt from the mandatory minimum penalties for violation of certain effluent limitations, and would be subject to issuance of a Cease and Desist Order in accordance with CWC section 13301.

I, PAMELA C. CREEDON, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on XX June 2008.

PAMELA C. CREEDON, Executive Officer

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Cyanide	µg/L	13.1